

GLOBALPLATFORM™

ADVANCING STANDARDS FOR SMART CARD GROWTH

GlobalPlatform: a Secure Dynamic Multi-Application Smart-Card Management

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Agenda

Multi Application Smart Cards

Card Management

Interoperability

Security

Business Models

GlobalPlatform Consortium

Implementations

Case for Multi-Application Cards

Today -

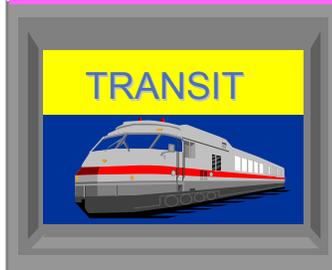
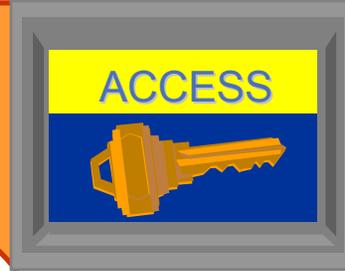
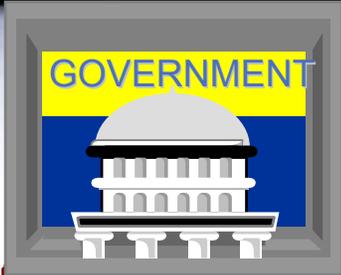
Lots of Cards

Lots of credit/debit cards ...
Different pins - different procedures
Different acceptance and capabilities

Lots of ID cards
Different trust and authentication levels
Visual evidence of your authorizations,
memberships, affiliation



Multi-Application Vision



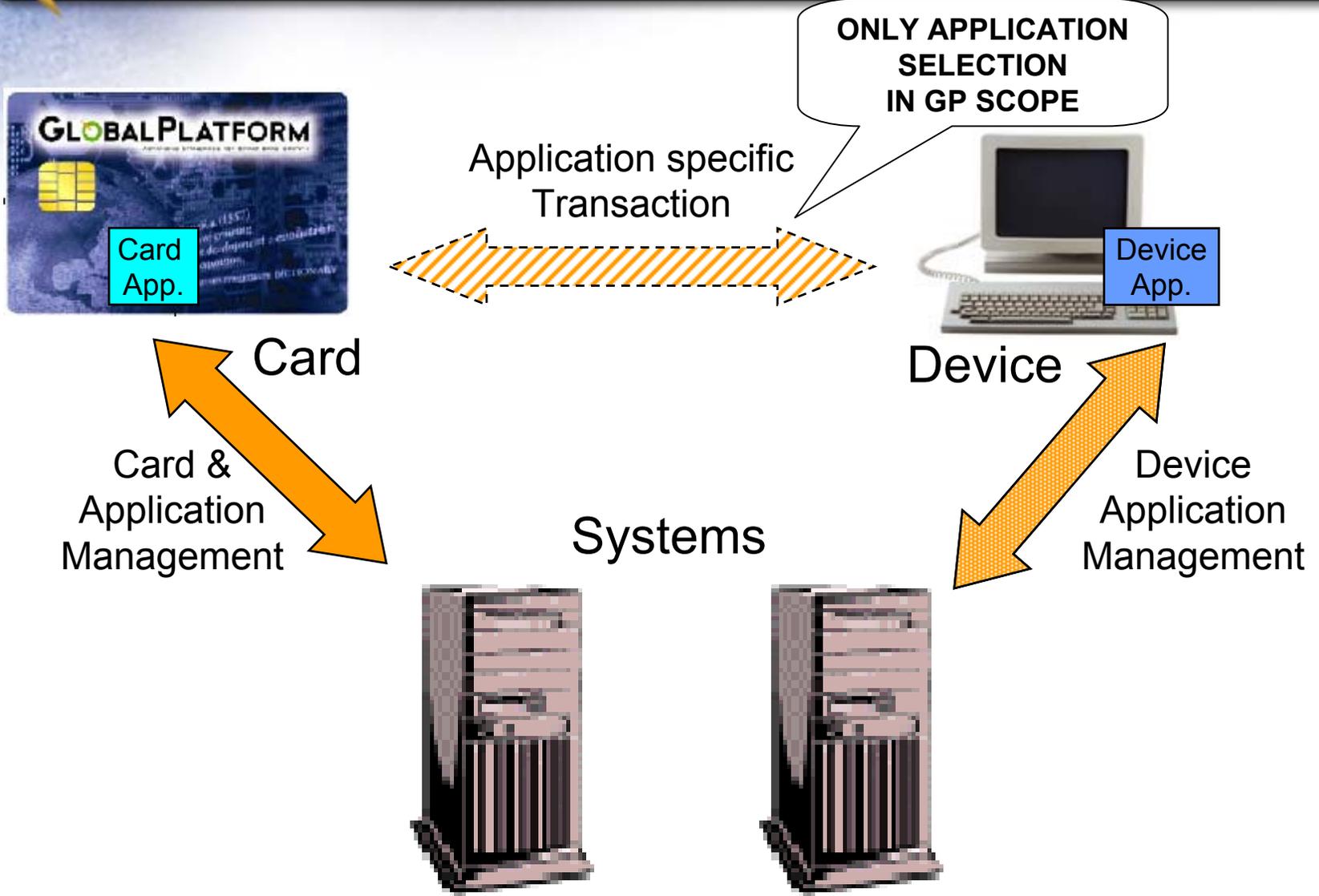
Any Application, Any Time, Any Where

- Multiple Applications on a single card
 - ➔ Market Segment of One
- Cross-industry and card schemes interoperability
 - ➔ Any type of Application
- Multiple Application Providers on a single card
 - ➔ Multiple business partnerships
- Dynamic pre-issuance or post-issuance load / removal of Applications
 - ➔ Anytime, Anywhere Access
 - ➔ Freedom and choice for cardholders
- Portability of Applications across smart cards
 - ➔ “Write Once, Run Anywhere”™

What is an Application?

- Three processors for one Application:
 - Smart card
 - (Card Accepting) Device
 - Host
- Distributed system:
 - Smart card application
 - Device application
 - Host application
- Relies on an infrastructure

Overall System Components

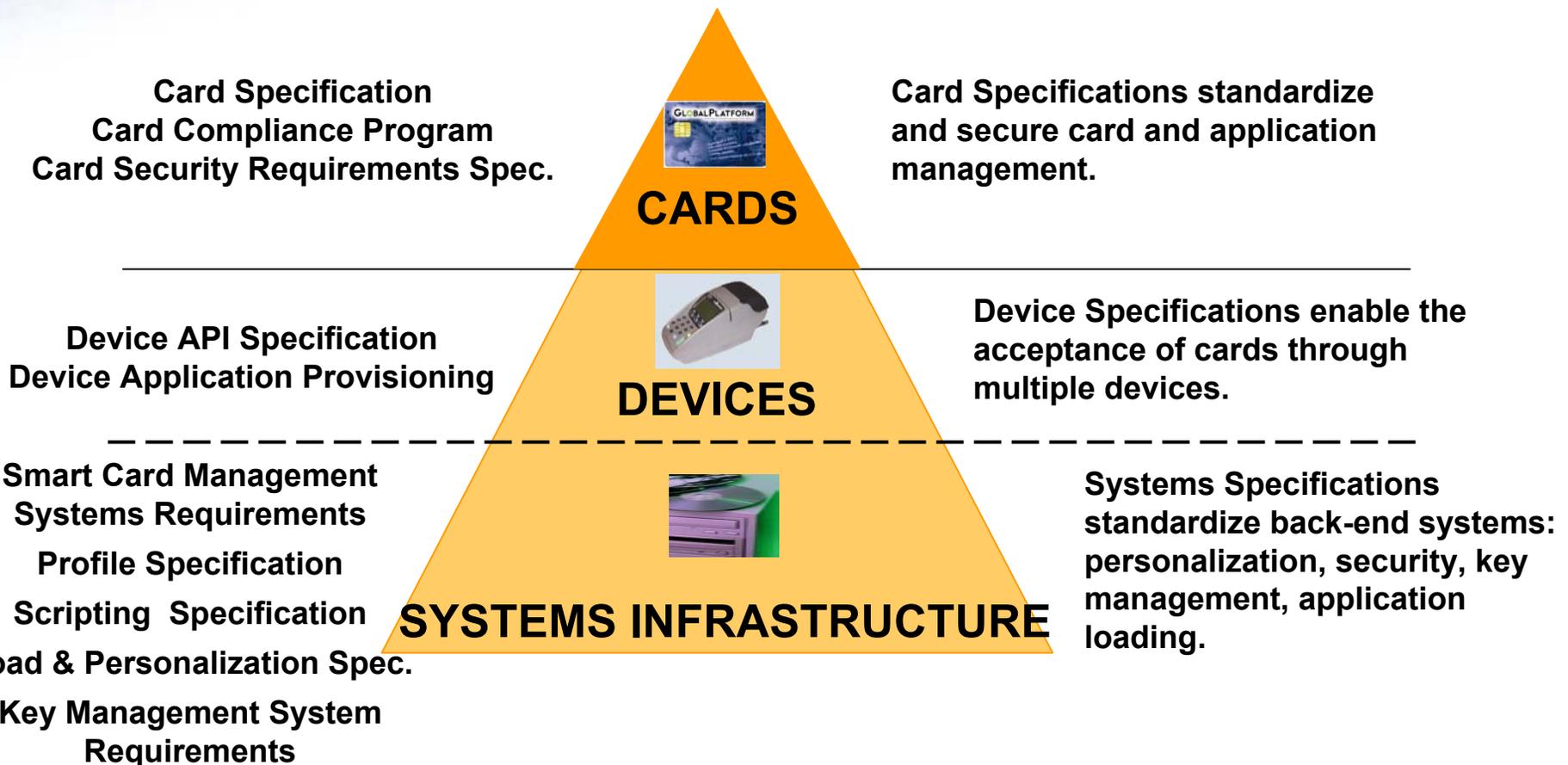


Managing a Smart-Card System

- The card is the tip of the iceberg
- The smart card system infrastructure must manage
 - Distributed software among all system componentsPlus
 - Hardware: the smart-card itselfAnd
 - Security (distributed over the entire system)And
 - Customization (a card is highly personal)
- A nice IT management challenge...

End-To-End Infrastructure

GlobalPlatform delivers the complete set of smart card specifications for an end to end smart card infrastructure.



Interoperability @ Infrastructure



Compatibility and interoperability among:

- Applications
- Cards
- Devices
- Systems



POS



Mobile Phone



Set Top Box



ATM



PC



PDA



Card Management Systems



Application Servers



Personalization Systems



Device Management Systems



Key Management Systems

Secure Management Framework

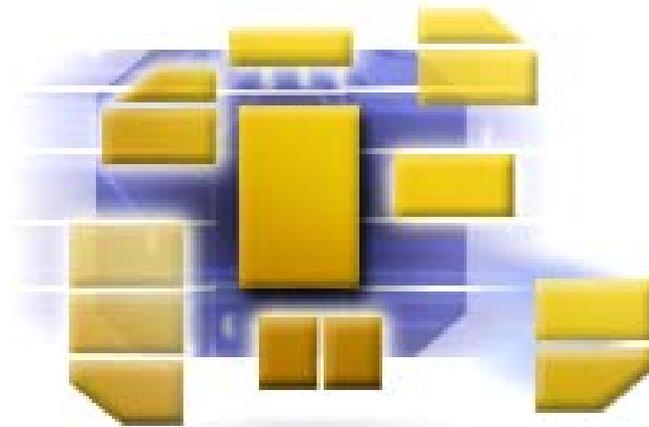
- Secure process:
 - Secure on-card platform
 - Application separation by default
 - Can't load/remove an application without proper authority
 - Authenticity and integrity of application code verified during loading
 - Flexible process:
 - Establish clearly roles & responsibilities
 - On-card platform securely manages card and application lifecycle
 - Applications deploy their own security features as need be
- ➔ Wide range of management and relationship models

Business Relationship Models

- Allow a multiplicity of trust models:
 - Controlling Authority Model
 - Issuer Centric Model
 - Application Provider Empowered Model
 - Optional on-card “global” Cardholder Verification Method(s)
- Allow a multiplicity of privacy models:
 - Centralized back-office systems (SCMS, transactions, data capture, etc)
 - Distributed back-office systems (SCMS, transactions, data capture, etc)
 - Separation of applications by default (lifecycle, transactions, etc)
 - Limited secured on-card registry
- ➔ Open to a multiplicity of business relationships
 - Card Issuer <-> Application Providers
 - Card Issuer / Application Providers <-> Cardholders

GlobalPlatform Mission

Establish an open smart card infrastructure that enables Issuers from many industries to deploy and manage multiple applications through a variety of devices for their customers.



Role & Objectives

Lead the migration from restrictive proprietary environments to an open, interoperable smart card infrastructure

- Meet needs of Issuers from various industries
- Define and promote cross-industry interoperability
- Ensure broad adoption of specifications
- Promote open standards and infrastructure
- Remain relevant by improving technologies

NO LICENSE FEES

NO RESTRICTIONS ON USAGE



Value of GlobalPlatform

Relationship Optimization Tool:

Delivering the next generation of customer relationship management and customer self-service: leading the move from Customer Management to Customer Empowerment

GlobalPlatform = Interoperability

Customer Empowerment Tool:

Granting freedom of choice and comparison through a dynamic portfolio of personally relevant, evolving services

GlobalPlatform = Scalability



Partnership Tool:

Allowing the coexistence of multiple applications from multiple business partners through a wide range of relationship models

GlobalPlatform = Security

Cross-Industry Applicability:

Meeting the diverse needs of Issuers across all sectors-private and public-to deliver customer, constituent and employee based services.

GlobalPlatform = Flexibility

Global Utilization:

Insuring usage of services and identity, anytime, anywhere through multiple channels and touch points

GlobalPlatform = Portability

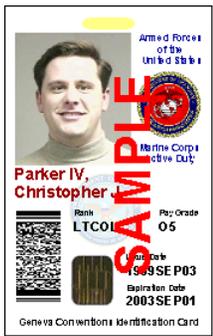
Cross-industry Collaboration

- Close collaboration GlobalPlatform – STIP
 - Total convergence
 - Cross-collaboration with FINREAD (eEurope Smart-card Charter)
- Close collaboration GlobalPlatform – SCP
 - Around 03.19 and 03.48 GSM & 3G specifications
 - Cross-referencing
- Close collaboration GlobalPlatform – NICSS (Japan)
 - MOU
 - Objective: convergence
- Close collaboration GlobalPlatform – NIST
 - Dual compliance (e.g. DoD CAC cards)
- Next version of GlobalPlatform Card Spec.
 - Address new SCP technical requests
 - Address new PKI based models (e.g. NICSS)

Implementations

- GlobalPlatform is used by over 200 million SIMToolKit cards
- Over 20 million GlobalPlatform compliant cards

US Department of Defense



US Smart Visa



Taiwan Health Card



Moscow Social Card



and ANZ Bank, Macau SAR, SKT, Sumitomo, Amex Blue, Finland, etc...

➤ Estimation at end of 2003: 40 millions

GLOBAL PLATFORM™

ADVANCING STANDARDS FOR SMART CARD GROWTH

THANK YOU

<http://www.globalplatform.org>

Growth \grōw-th\
a: the process of growing
b: progressive development : evolution
c: increase, expansion.
MERRIAM WEBSTER'S COLLEGIATE DICTIONARY